**WRIGHT-PATTERSON AIR FORCE BASE**
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# *NEWS RELEASE*

## AF TO HOUSE DoD's MOST POWERFUL SUPERCOMPUTER AT WPAFB

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WRIGHT-PATTERSON AIR FORCE BASE, Ohio – The Department of Defense's (DoD) High Performance Computing Modernization Program Office (HPCMP) has announced the award of a new high performance supercomputer for the Aeronautical Systems Center's Major Shared Resource Center (ASC MSRC) here.

The ASC MSRC will enhance their computing power with the installation of a 2,048-processor SGI Altix supercomputer, which will aid weapon systems design of innovative materials; advance design concepts; improve and speed modification programs; increase high fidelity simulations; and enable more efficient tests and evaluations.

The SGI Altix 3700 Bx2 supercomputer is powered by 2,048 1.6 GHz Intel® Itanium® 2 processors, 2 TB of memory, the SGI NUMAlink™ interconnect, and 128 TB of disk. The entire 2 TB of memory will be globally addressable by any processor in the system, which will run the Linux® operating system and support the Intel C, C++, and Fortran compilers. This latest SGI system expands ASC MSRC's SGI supercomputing capability to more than 4,100 processors spread across five separate shared memory systems.

"In our efforts to serve more than 1,000 researchers throughout the DoD, we needed a supercomputer with industry-leading capability, scalability, production quality, ease of use, and the ability to handle massive amounts of data," said Steve Wourms, deputy director for ASC's Advanced Computational Analysis Directorate. "SGI has been delivering that to Wright-Patterson for almost 20 years. This is the latest example of SGI's unique ability to take state of the art, market-leading trends, such as the Linux operating system and Intel Itanium 2 CPUs, and make it easy to use for engineers who aren't computer scientists. This SGI Altix supercomputer at the ASC MSRC will help power groundbreaking research and development for the DoD weapon systems of the future."

The SGI Altix family of servers and supercomputers are designed to meet the requirements of scientific, engineering and creative users in the government who require record performance, unparalleled value, and industry-leading 64-bit Linux solutions to keep pace with the growing demands of government applications.

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"SGI's technology enables the Department of Defense to develop next-generation weapon systems that allow the U.S. to maintain a technological advantage over our adversaries," said Benn Stratton, National Director of Defense & Civilian Agencies Business Unit, SGI Federal. "Our high-performance computing technology today is creating new ways for the Department of Defense to achieve military advantage and warfighting superiority on the 21st century battlefield. This massive shared-memory system from SGI allows the DoD to simulate entire aircraft, entire weapon systems, and entire battlefield engagements, with a fidelity not possible before now."

During a test run at SGI's manufacturing facility in Chippewa Falls, Wisconsin, the new system achieved **Linpack benchmark performance of 11.636 Tflop/s (trillions of calculations per second) while operating at over 90** percent efficiency.

The SGI Altix arrived at the ASC MSRC on Wednesday, March 23, and within two days, the system was ready to be powered up. According to Gregory W. Larson, AF Major Account Manager, SGI Federal Inc, "It took the SGI team less than 48 hours from placement of the first rack until the entire 2048 was cabled together, powered up, and running." This newest supercomputer from SGI contains a total of 41 racks, each of which uses as much power and cooling as a regular four bedroom house, and over 1400 interconnecting cables. The increased performance and scalability provided by this Linux-based SGI supercomputer will help put advanced technology in the hands of U.S. forces more quickly, less expensively, and with greater certainty of success. This SGI system will not only meet the high performance computing requirements of the ASC MSRC but will also greatly benefit the broad user base of scientists and engineers across the HPCMP who are driving the nation's scientific and engineering research and development.

The ASC MSRC is a computational science facility supporting DoD research, development, and test and evaluation communities with high performance computing and visualization resources. Created as part of the DoD's HPCMP, the ASC MSRC High Performance Computing Center is located on Wright-Patterson Air Force Base and is one of four DoD MSRC sites.

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Additional information about the SGI Altix 3700 Bx2 SuperCluster:

SGI Altix 3700 Bx2 SuperCluster System

SGI Altix 3700 Bx2 SuperCluster System

The Quick Reference Guides for the new SGI Altix 3700 supercomputer will be posted on the ASC MSRC website before this new system becomes accessible for users in the autumn timeframe.

- 2048 1.6 GHz Intel Itanium2 processors (6 Gigaflop/ Processor)
- 4 Nodes (512 processor /node, 500 processors available to users)
- 2 TB of memory, globally addressable by any processor in the system
- SGI NUMAlink interconnect
- 128 TB of disk
- Linux operating system with support for the Intel C, C++, and Fortran compilers.